with right ventricular dysfunction($S' < 11.5$ Cm/S) are excluded (P value $<0.0001, r = 0.91$).

Receiver-operating characteristics (ROC) curve for predicting a SPAP of 40 mmHg or higher showed That rIVRT' >38 ms predicts pulmonary hypertension with 100% sensitivity, 90%specificity, while a rIVRT' <38 ms excluded pulmonary hypertension with 100% negative predictive value.

Conclusions: Although there is extremely positive correlation between SPAP measured invasively through right heart catheterization and that estimated from peak tricuspid regurge velocity there are difficulties in assessment of TR specially in obese and COPD patients. rIVRT' appears to be helpful in evaluating SPAP, a normal rIVRT'< 38 ms can exclude PAH with a high negative predictive value. A prolonged rIVRT' is indicative of PAH but cannot affirm it by itself.

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Validity of tissue Doppler markers in the assessment of pulmonary hypertension

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Background: The accuracy of tissue Doppler parameters of right ventricular function including Isovolumic relaxation time (IVRT) and Isovolumic contraction time (IVCT) have not been validated sufficiently in pulmonary hypertensive patients (pts).

Purpose: To assess the ability of tissue Doppler imaging (TDI) – as a noninvasive method – to predict pulmonary artery pressure and to determine the possibility of assessment of severity of pulmonary hypertension.

Patients and methods: The study population comprised three parallel groups of consecutive patients. The study groups were: Group I (31 control subjects) in which conventional Doppler and TDI-derived echocardiograpic variables were measured from lateral tricuspid annulus and compared with Group II (30 pts with pulmonary hypertension and normal left side structure and function) and group III (30 pts with pulmonary hypertension and dilated cardiomyopathy).

Results: In group I the median age of the pts was 40.4 years, 68% of them were males while in group II the median age of the pts was 35.5 years, 76.7% of them were females while in group III the median age of the pts was 33.5 years, 80% of them were males. The estimation of PASP was derived from tricuspid regurgitation velocity according to the Bernoulli equation. The measurement of IVRT was calculated using pulsed tissue Doppler. In group II and in group I (P, 0.0001), the average IVRT was 81.00 ± 6.3 ms [95% confidence interval (CI): 65–96] and 32.3 + 7.05 ms (95% CI: 20–50), respectively. We found a strong correlation between IVRT and systolic pulmonary pressure in group II ($r = 0.57, P, 0.0001$) and a cut-off of 70ms showed a sensitivity and specificity of 96% and 97%, respectively, for the prediction of elevated PASP. In group II and in the group I ($P, 0.0001$), the average IVCT was 34.2 ± 4.8 ms [95% confidence interval (CI): 25–45] and 61.5 + 9.7 ms (95% CI: 45–75), respectively. We found a strong inverse correlation between IVCT and systolic pulmonary pressure in the PH group ($r = -0.38, P, 0.0001$) and a cut-off of 35.5 ms showed a sensitivity and specificity of 60% and 64%, respectively, for the prediction of elevated PASP.

Conclusions: The measurement of IVRT and IVCT by TDI is a simple and reproducible method that correlates well with PASP. It is, therefore, parameters to consider in the echocardiographic assessment of pts with PH, and may be particularly important when the tricuspid Doppler signal is poor.

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Value of modified selvester QRS score in prediction of successful reperfusion in patients with acute myocardial infarction

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Background: Reperfusion therapy basically aims to restore full antegrade flow in the infarct-related epicardial coronary artery. The modified Selvester QRS score, basically developed to estimate infarct size, was used with good predictive value to predict ST-resolution in acute myocardial infarction (AMI) treated with fibrinolysis. However, little data are available about its role in predicting reperfusion in ST-segment myocardial infarction (STEMI) patients undergoing primary percutaneous coronary interventions (PCI).

Objectives: Was to examine the value of modified Selvester QRS score in predicting ST-segment resolution in patients with first acute STEMI after thrombolytic therapy or primary PCI.

Methods: Sixty patients with acute STEMI were enrolled in the study, 56 males and 4 females; and their mean age was 56.4 ± 8.4 years. We excluded patients with bundle branch block, paced rhythm, left fascicle block, ECG signs of ventricular hypertrophy, cardiogenic shock and prior STEMI.

All patients were submitted to full history taken and clinical examination, admission 12-leads electrocardiography (ECG) with estimation of modified Selvester QRS score and sum of ST-elevation, another ECG after 90 minutes of thrombolysis with estimation of the sum of ST-elevation and ST-resolution, cardiac enzymes, thrombolysis for 45 patients and primary PCI for 15 patients, echocardiographic assessment with measuring of left ventricular ejection fraction (EF) and wall motion score index (WMSI), and coronary angiography.

Results: Population characteristics and risk factors for coronary artery disease (CAD) were comparable between the two groups. In patients with QRS score >4, time to admission was significantly higher, EF was significantly lower, WMSI was significantly higher, number of patients with no ST-segment resolution was significantly lower, number of patients with myocardial blush grade (MBG) 1 was significantly higher, number of patients with MBG 3 was significantly lower, and number of patients with three-vessel disease was significantly higher. Sensitivity of QRS score $\leqslant 4$ in predicting ST-segment resolution $\geqslant 50\%$ was 59.3%, specificity was 100%, positive predictive value was 62.1%, negative predictive value was 86%, and overall accuracy was 75.6%. There was a highly significant negative correlation between ST-segment resolution and QRS score ($r = -0.483$, $p = 0.00078$).

Conclusion: Selvester QRS scoring system is regaining its clinical value in patients with first STEMI. It can provide valuable information as regard area of myocardium at risk, prediction of residual left ventricular function, making treatment decisions. Though somewhat difficult, it is worthy to calculate QRS score from admission ECG in every patient presenting with STEMI. In patients who are controversial as regard thrombolytic therapy, QRS score could help in determining those who will get benefit from such therapy.

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